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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/759,389 | 01/16/2004 | Jun-Hyung Souk | AB-1351 US | 6707 |
| 7590 | 12/29/2005 | | EXAMINER | |
| MacPherson Kwok Chen & Heid LLP Suite 226 1762 Technology Drive San Jose, CA 95110 | | | TON, MINH TOAN T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2871 | |

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/759,389

Applicant(s)

SOUK ET AL.

Examiner

Toan Ton

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
4a) Of the above claim(s) 6-14 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5, 15-29 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Akamatsu et al (US 6414730).

Akamatsu discloses a liquid crystal display device comprising (see at least Figures 1-2): a gate conductive layer 52 formed on an insulating substrate 51; a gate insulating layer 53 on the gate conductive layer; a semiconductor layer 54 on the gate insulating layer; a data line formed on the gate insulating layer and including a source electrode 55; a drain electrode 56 formed at least in part on the semiconductor layer; a passivation layer 68 formed on the data line and the drain electrode and having a first contact hole exposing the drain electrode at least in part and a portion of the gate insulating layer; and a pixel electrode 70 formed on the passivation layer and contacting the drain electrode and the exposed portion of the gate insulating layer through the first contact hole, wherein the gate insulating layer comprising *at least a portion* that separates the pixel electrode from the insulating substrate.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-5 and 15-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akamatsu et al as applied to claim 1 above.

Akamatsu discloses at least one of the gate line, the data line, and the drain electrode comprising of a multi-layer structure including a low resistance metallic material such as Al. Further, the use of Cr, Mo or Mo alloy the gate line/the data line/the drain electrode is common and known in the art for advantages such as high conductivity. Therefore, it would have been at least obvious to one of ordinary skill in the art to employ at least one of the gate line, the data line, and the drain electrode comprising of a multi-layer structure including a low resistance metallic material such as Al, Al alloy, Cr, Mo or Mo alloy, as common and known in the art for advantages such as high conductivity.

Akamatsu discloses the gate insulating layer and the passivation layer comprising silicon nitride (see at least col. 8, lines 45-47, col. 9, lines 9-10).

Akamatsu discloses the pixel electrode comprising a transparent conductive material such as ITO. Other common and known transparent conductive materials such as IZO used for the pixel electrode are at least functionally equivalent to ITO. Therefore, it would have been obvious to one of ordinary skill in the art to employ common and known transparent conductive materials such as IZO used for the pixel electrode since IZO is at least functionally equivalent to ITO.

Akamatsu discloses contact holes exposing portions of the gate line, the data line, contact assistants contacting exposed portions of the gate line and the data line (see at least Figures 4-7).

It appears that the new particular claimed-structure(s) of the passivation layer and the pixel electrode with respect to the gate insulating layer would have been at least obvious variations (i.e., not patentably distinct) to the passivation layer and the pixel electrode that is recited in claim 1 (further, see at least Figures 1-2 of Akamatsu).

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of U.S. Pub No. 2005/0030440. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims are broader in scope than the claims of US Pub No. 2005/0030440.

Response to Arguments

7. Applicant's arguments with respect to claims 1-5 and 15-29 have been considered but are moot in view of the new ground(s) of rejection.

Akamatsu discloses a liquid crystal display device comprising (see at least Figures 1-2): a gate conductive layer 52 formed on an insulating substrate 51; a gate insulating layer 53 on the gate conductive layer; a semiconductor layer 54 on the gate insulating layer; a data line formed on the gate insulating layer and including a source electrode 55; a drain electrode 56 formed at least in part on the semiconductor layer; a passivation layer 68 formed on the data line and the drain electrode and having a first contact hole exposing the drain electrode at least in part and a portion of the gate insulating layer; and a pixel electrode 70 formed on the passivation layer and contacting the drain electrode and the exposed portion of the gate insulating layer through the first contact hole, wherein the gate insulating layer comprising *at least a portion* that separates the pixel electrode from the insulating substrate.

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8. Applicant's arguments with respect to obvious double patenting rejection have been fully considered but they are not persuasive.

It is noted the nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified *or* improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


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Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 22, 2005


TOANTON
PRIMARY EXAMINER